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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,224	07/08/2003	Yuko Harumoto	463P104	8527

7590 08/09/2004
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EXAMINER

SAWHNEY, HARGOBIND S

ART UNIT PAPER NUMBER

2875

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,224

Applicant(s)

HARUMOTO, YUKO

Examiner

Hargobind S Sawhney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/7/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it includes legal phrase "comprising" in line 1. The phrase "comprising" may be replaced with --including--.
Correction is required.

Claim Objections

2. Claims 8-10 are objected to because of the following informalities:
Claim 8, line 5, " in" should be rephrased as --from—for clarity;
Claims 9 and 10 are necessarily objected because of their dependency on the objected base Claim 8.
Appropriate correction is required.
Claim 8 of the instant application has been examined considering the rephrasing of the claim as above suggested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Luk (US Patent application Pub. No.: US 2002/0181231 A1) hereinafter referred as Luk ('231 A).

Regarding Claim 1, Luk ('231 A1) discloses a light source system comprising light emitting diodes (LEDs) D1-D8 with different light emitting colors (Figures 10 and 13, Para. 0158) arranged at a predetermined ratio of quantity of LEDs positioned at each curved configurations formed on the LED support (Figures 10 and 13, Para. 0155). Luk ('231 A1) further teaches the ratio of the quantities of LEDs D1-D8 being based on the light emitting status of each diode of each color, and quantity of diodes for a projected light of predetermined chromaticity (Figures 10 and 13, Para. 0158).

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Regarding claims 4-7, Luk ('231 A1) discloses the light source system additionally comprising:

- the LEDs D1-D8 arranged in concentric multiple circles (Figures 10 and 13, Para. 0154);
- LEDs of different light emitting colors being arranged in the multiple concentric circles (Figures 10 and 13, Para. 0158);
- LEDs of same light emitting colors being arranged in the multiple concentric circles (Figures 10 and 13, Para. 0158); and
- the light emission of LEDs D1-D8) being controlled for each color (Figures 10 and 13, Para. 158).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luk (US Patent application Pub. No.: US 2002/0181231 A1).

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Regarding claims 2 and 3, Luk ('231 A1) discloses a light source system comprising light emitting diodes (LEDs) with different light emitting colors (Figure 13, Para. 0158) arranged on a conically curved LED support.

However, Luk ('231 A1) does not teach the LED support being a spherical or an elliptical curved support in the embodiment meeting the limitations of Claim 1.

On the other hand, Luk ('231 A1) further teaches a source system including an LED curved support being either a spherical or an elliptical curved support (Figures 14 and 17, Paragraphs 0042, 0159 and 0172) in other embodiments.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the light source system of Luk ('231A1) by providing the either spherical or elliptical LED support surfaces for benefit and advantage their accommodating larger quantity of LEDs as compare to that could be placed a planer or conical support surfaces.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luk (US Patent application Pub. No.: US 2002/0181231 A1) in view of Tait et al. (US Patent No.: 6,598,994 B1).

Regarding Claim 8, Luk ('231 A1) discloses a light source system comprising light emitting diodes (LEDs) positioned at each curved configurations formed on the LED support). Additionally, the light source disclosed by Luk ('231 A1) includes a mixer 118 projecting a plurality of incident monochromatic lights from the LEDs D1-D8 (Figure 10, Para. 0143).

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However, Luk ('231 A1) does not teach a source system including a light guiding means for entering the light from each of the LEDs to the mixer.

On the other hand, Tait et al. ('994 B1) discloses an illumination system (Figure 8b, including a light guiding means 70 guiding the light from the each of the LEDs 40 (Figure 8b, column 7, lines 2-14).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the light source system of Luk ('231A1) by providing the guiding means as taught by as taught by Tait et al. ('994 B1) for benefit and advantage of smoothing the illumination resulting from overlapping of beams, and reducing wastage of light by converging light beams.

Regarding Claim 9, Luk ('231 A1) in view of Tait et al. ('994 B1) teaches the light source system further including a condenser lens operating as a light guiding member (Figure 8b, column 7, lines 2-14).

Allowable Subject Matter

8. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The prior art of record, including Luk (US Patent application Pub. No.: US 2002/0181231 A1) and Tait et al. (US Patent No.: 6,598,994 B1), does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose a light source system combining:

- a condenser lens arranged on a curved surface bearing a plurality of LEDs, and a mixture being mounted at the apex of a conical cover covering the LEDs as recited in Claim 9.

The above-indicated combination, including relative positioning of the lens, conical cover and mixture, makes this invention unique.

Therefore Claim 10 is objected over prior art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sjobom (U.S. Patent No. 5,896,093; Bailey et al. (U.S. Patent No.: 5,752,766); Polidor et al. (U.S. Patent No. 5,690,417); Deck (U.S. Patent No. 5,309,277); Arnold (U.S. Patent No. 4,893,223) and Streifer et al. (U.S. Patent No. 4,826,269)

Each of the above-indicated prior arts discloses a light source system comprising some of the claimed features claimed by the applicant.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S Sawhney whose telephone number is 571-272-2380. The examiner can normally be reached on 6:15 - 2:45.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306/7724 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2956.

HSS

8/2/2004



THOMAS M. SEMBER
PRIMARY EXAMINER